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Foreign Animal Disease Report

United States
Department of Agriculture

Animal and Plant
Health Inspection Service

Veterinary Services

Emergency
Programs



Number 18-3

FALL 1990

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Emergency Programs Activities

The articles in this section of the Foreign Animal Disease Report (FADR) briefly summarize some of the activities completed or coordinated by the Emergency Programs Staff, Operational Support branch, Veterinary Services (VS), Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (USDA).

Foreign animal disease investigations. USDA-APHIS and State-employed veterinarians investigated a total of 89 suspected cases of foreign animal diseases (FAD) during the period January 1 through June 30, 1990.

Of the 89 investigations, there were 45 suspected vesicular conditions; 13 suspected exotic Newcastle disease, avian influenza, or other poultry diseases; 7 suspected hog cholera or African swine fever; 4 suspected mucosal disease or rinderpest; 5 suspected encephalitis; and 15 suspected exotic ectoparasite or miscellaneous conditions. During the first three quarters of fiscal year 1990 (October 1, 1989, through June 30, 1990), 133 investigations for suspected FAD were conducted. All investigations were negative.

Avian influenza (AI) surveillance. The AI surveillance program in the live bird markets in the Northern Region of the United States was continued during calendar year 1990 (see 17-1:1). Bird markets in the New England area are tested periodically. Two markets in Rhode Island are tested semiannually; four markets in Massachusetts and five in Connecticut are tested quarterly. All were tested or will be tested once or twice in 1990. Tracheal and cloacal swabs from a representative number of poultry on each premises were tested, and environmental samples were collected and cultured. All high-risk, live-bird markets in New York are sampled yearly. At least 30 environmental swabs are collected for culture from each market. The last survey was conducted in March and April of 1990.

All known live-bird markets in New Jersey are tested annually. Cloacal swabs from representative birds in each lot and environmental samples are collected at each market. In April, 25 live-bird markets, 2 dealerships, and 2 auction markets were sampled.



In Pennsylvania, all live-bird markets are tested under a State program. Environmental samples and cloacal swabs from live-bird markets are collected and tested. In addition, blood samples are taken from birds at livestock and poultry markets, and eggs from over 800 layer houses are submitted and tested.

In the past 2 years, no isolates of H5N2 have been found in live-bird markets in the Northeastern United States. AI type H5N2 is the virus that caused extensive losses in the Northeast in 1983 and 1984 (see 12-2:5).

Surveillance program for bovine spongiform encephalopathy (BSE). While BSE is not known to exist in the United States, APHIS, in cooperation with State veterinary diagnostic laboratories and Iowa State University, is conducting a national surveillance program to determine the status of BSE. The disease has been reported only in Great Britain, Oman, and the Irish Republic. APHIS has also taken several actions to determine the status of BSE in other countries and prevent its introduction into the United States.

In July 1989, the United States began prohibiting the importation of live cattle from Great Britain. Cattle owners who have imported cattle from the United Kingdom since January 1, 1981, are being contacted to determine if any of these cattle have shown signs of central nervous system abnormality. Information on the diagnostic and clinical characteristics of BSE has been prepared and distributed to alert FAD diagnosticians, practicing veterinarians, diagnostic laboratory personnel, veterinarians in colleges of veterinary medicine, the livestock industry, and others to the risk this disease presents to the United States. Copies of videotapes on BSE have been sent to State and Federal animal health officials, schools and colleges of veterinary medicine, and diagnostic laboratories. Project summaries of research being conducted in the United States and a bibliography of articles on scrapie and BSE have also been prepared and distributed. Articles listed in the bibliography are available from the VS Data Bank (see 17-4:13).

Recorded Emergency Animal Disease Information (READI) System workshops were conducted in three VS Regions as follows: August 2-3, 1990, Southeastern - Tampa, Florida; August 7-8, 1990, Central - Fort Worth, Texas; and August 14-15, 1990, Northern - Scotia, New York. Two READI workshops were previously held in the Western Region.

Workshop participants included Regional Emergency Animal Disease Eradication Organization directors, field operations officers, disease reporting officers, epidemiologists, computer support officers, and data clerks from each Regional Office and from an Area Office in each Region.

The purpose of these workshops was to provide experience and information that will permit the system to operate effectively during an animal disease emergency.

Industry-USDA Roundtable. On June 12, 1990, a group of livestock industry organizational representatives met with APHIS officials at the conference room of the National Milk Producers Federation in Arlington, VA. A total of 15 individuals attended, 10 representing industry organizations, the American Veterinary Medical Association, and the American Association of Veterinary Medical Colleges. Subjects discussed included the APHIS organizational infrastructure, African horse sickness, recent recommendations of the Secretary of Agriculture's Advisory Committee on Foreign

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Animal and Poultry Diseases, foot-and-mouth disease vaccine, FAD guidelines, USDA Strategic Plan for FAD preparedness, FAD surveillance, and BSE. (Dr. M. A. Mixson, USDA, APHIS, VS, Emergency Programs, Hyattsville, MD 20782, (301) 436-8073)

The Office International des Epizooties (OIE) reported the following occurrences of animal diseases that are foreign to the United States, for the first quarter of calendar year 1990:

In South America, Bolivia reported outbreaks of foot-and-mouth disease (FMD) types O and A, in January. Colombia reported 16 outbreaks of FMD type O and 66 outbreaks of type A in January and February. Paraguay reported outbreaks of FMD type O in January. Venezuela reported 5 outbreaks of type O between November 1989 and February 1990, and outbreaks of type A in January and February.

In Europe, the U.S.S.R. reported outbreaks of FMD type O in November and December, type A in January, and type C in February.

In the Middle East, Bahrain reported outbreaks of FMD type O in February. Jordan reported outbreaks of untyped FMD between September and December 1989 involving 477 cases. A report in February 1990 indicated all isolations were type O. Oman reported outbreaks of type O and Asia 1 in November 1989. Turkey reported 19 cases of type O in December and February, with 5,644 animals exposed. Type O outbreaks were also reported in Turkey during December through February, with 71 cases and 7,760 animals exposed.

In Africa, Chad reported outbreaks of FMD in December 1989. Kenya reported outbreaks of type O in October and SAT 2 in January. Tunisia reported 114 outbreaks of type O in November and 2,201 in December. In March, Tunisia reported 10 cases of FMD in cattle and sheep.

In Asia, the Far East, and Oceania, Hong Kong reported outbreaks of FMD type O in November 1989 through March 1990. Nepal reported outbreaks of types O and A in January. Pakistan reported outbreaks of types O, A, and Asia 1 in December, January, and February. Thailand reported outbreaks of type O every month during the last half of 1989, involving 10,851 cases in bovine, swine, and buffalo.

Vesicular stomatitis was reported in Colombia, Mexico, Panama, and Venezuela. Colombia reported that both New Jersey (VS-NJ) and Indiana (VS-IN) types occurred during January and February. Mexico reported 60 animals exposed to an outbreak of VS-IN in December and 36 cases of VS-NJ in December and January. Panama reported VS-IN and VS-NJ in December, January, and February. Venezuela reported VS-NJ during November through February.

No outbreaks of **swine vesicular disease**, **fowl plague**, or **Rift Valley** fever were reported during the quarter.

One outbreak of **rinderpest** involving 7 cases was reported in January from the U.S.S.R.

Oman reported 15 outbreaks of **peste des petits ruminants** (pest of small ruminants) during January. The Ivory Coast reported 14 outbreaks during December, January, and February, with 1,512 animals exposed. Oman reported nine outbreaks during November and December.

Contagious bovine pleuropneumonia was reported in four African countries, and in Kuwait and Portugal. Egypt reported outbreaks during November. The Ivory Coast reported outbreaks during December, January, and February. Kenya reported 14 outbreaks occurring during October through January. Kuwait reported outbreaks involving 48 cases during December, January, and February. Namibia reported outbreaks during February exposing 330,000 cattle. Portugal reported between 53 and 149 outbreaks during each month of 1989.

The Ivory Coast reported **lumpy skin disease (LSD)** in December, January, and February. Other African countries reported outbreaks of LSD as follows: Kenya, from October through January; Madagascar, 47 outbreaks, September through December; Namibia, 232 cases in January and 787 cases in February; South Africa, during December, January, and February; and Zimbabwe, 3 cases in January.

Bluetongue was reported in Malaysia in September and November and in South Africa in December, January, and February.

Sheep and goat pox (SGP) was reported in Algeria, China, the Ivory Coast, Jordan, Kuwait, Morocco, Oman, Pakistan, Tunisia, and Turkey. The following countries reported SGP outbreaks: Algeria, 18 outbreaks with 142 cases during July 1989, 68 outbreaks involving 664 cases during August through December 1989, and 9 outbreaks with 207 cases during January and February; China, in December; the Ivory Coast in December, January, and February; Jordan, 152 cases during September through December; Kuwait, 24 outbreaks involving 148 cases and exposing 4,250 animals during December through February; Morocco, 9 outbreaks with 19 cases and 2,066 animals exposed during January and February; Oman, October, November, and December; Pakistan, December, January, and February; Tunisia, 15 outbreaks involving 1,700 animals during November and December; Turkey, 119 outbreaks with 1,655 cases in December, 97 outbreaks with 1,897 cases and 252,240 sheep exposed in January, and 66 outbreaks with 569 cases and 285,871 sheep and goats exposed in February.

African horse sickness (AHS) was reported in Portugal, Senegal, and South Africa. Portugal reported 97 AHS outbreaks from September through November, Senegal reported 67 outbreaks during February, and South Africa reported outbreaks during December, January, and February.

African swine fever was reported by Italy during the months of January, February, and March. Portugal reported 9 outbreaks during December, 20 in January, and 5 in February. Spain reported 15 outbreaks during both January and February, and 25 outbreaks in March.

Twelve countries reported outbreaks of **hog cholera** during the quarter: Austria, 52 outbreaks, November through February; Belgium, 13 outbreaks in February; China, an average of 21 outbreaks during each month of 1989; the Federal Republic of Germany, 2 outbreaks with 38 cases during December, 16 outbreaks involving 1,693 cases in January, and 13 outbreaks involving 479 cases in February; Hong Kong, outbreaks

during November, December, and February; Italy, 5 outbreaks during January and February, and 7 outbreaks during March; Korea, 4 outbreaks during January; Madagascar, 18 outbreaks, September through December; Malaysia, 9 cases in 2 outbreaks during September and October; Mexico, 13 outbreaks during December involving 678 cases and 14,616 swine, 19 outbreaks with 1,601 cases and 19,011 animals exposed in January, 19 outbreaks involving 690 cases and 4,426 animals exposed in February; the Philippines, outbreaks occurring during November; Taiwan, 7 outbreaks involving 291 cases during December, and 4 outbreaks with 131 cases during January; and Yugoslavia, 3 outbreaks during December and January.

Madagascar was the only country reporting outbreaks of **Teschen disease**. Five outbreaks occurred during September, 11 in October, 12 in November, and 1 in December.

Seventeen countries worldwide reported outbreaks of **Newcastle disease** (ND; untyped and presumed to be velogenic, viscerotropic type). ND was reported from Africa in Botswana, Egypt, the Ivory Coast, Kenya, Madagascar, and Tunisia between September and February. In Tunisia, 64,600 birds were exposed during outbreaks in November and December. In the Americas, ND was reported from Mexico and Panama during December through February. Mexico reported nine outbreaks with 10,560 cases and 68,800 birds exposed. In Europe, ND was reported from Albania, Italy, and Yugoslavia. Albania reported three outbreaks involving 1,200 cases in December. In the Middle East, Jordan reported outbreaks occurring during September and November. Turkey reported 10 outbreaks involving 10,190 cases during December, 10 outbreaks involving 2,621 cases in January, and 5 outbreaks involving 852 cases in February. In Asia, China reported outbreaks during every month of 1989; Hong Kong reported outbreaks during November, January, and February; Kuwait reported 59 cases during February; and Pakistan reported outbreaks during February.

Velogenic viscerotropic Newcastle disease was reported in four countries: Pakistan during December; the U.S.S.R., with outbreaks exposing 16,403 birds during November; Botswana, during January and February; and Malaysia, 2,000 cases during November and 2,523 cases during December.

Viral hemorrhagic disease (VHD) of rabbits was reported in Denmark in January involving 43 cases. Malta reported 11 VHD outbreaks during January through March. Mexico continues to monitor rabbits for evidence of VHD; three cases were found there during May 1990.

Bovine Spongiform Encephalopathy (BSE) was reported in the United Kingdom (U.K.), Ireland, and Oman. The U.K. reported 852 confirmed cases of BSE in January 1990, and Oman reported 2 cases in Jersey cattle that had been imported from Great Britain. (Dr. M. J. Gilsdorf, International Services, APHIS, USDA, Hyattsville, MD 20872, (301) 436-8892)

Vesicular Stomatitis on Ossabaw Island

Surveillance of wild swine on Ossabaw Island, Georgia, has once again revealed infection with vesicular stomatitis New Jersey serotype (VS-NJ). Confirmed clinical infection due to VS-NJ was first observed on May 30, 1990; however, the virus was isolated earlier from nasal and tonsil swabs of three asymptomatic swine—two on May 16 and one on May 23. Between May 24 and June 6, suspect lesions were found on 16 swine, but VS-NJ was recovered from only three of these animals. All virus isolates were confirmed at the National Veterinary Services Laboratories, Ames, IA. At present,

243 juvenile wild swine have been captured, bled, tagged, and released in order to monitor seroconversion to VS-NJ. The suspected sand fly vector/reservoir, *Lutzomyia shannoni*, also is being studied through funnel trapping of adult flies as they leave tree holes in the evening. The flies will be allowed to feed upon hamsters that will later be tested for seroconversion for VS-NJ. Surveillance of wild swine will continue until late summer. (David E. Stallknecht, Dr. Victor F. Nettles, Joseph L. Corn, and J. Anderson Comer, Southeastern Cooperative Wildlife Disease Study, University of Georgia, Athens, GA 30602, (404) 542-1741)

Vesicular Stomatitis in Mexico, 1988

A longitudinal epidemiologic study of vesicular stomatitis was conducted in two bovine herds in Matias Romero, Oaxaca, and Playa Vicente, Veracruz, Mexico. An initial serological screening showed that about 35 percent of the cattle population were negative to the plaque reduction serum neutralization test for vesicular stomatitis antibodies. Based on the initial serological screening, cohorts of seronegative and seropositive cattle were followed up (January through December 1988) for the detection of and possible seroconversion to vesicular stomatitis antibodies. The serological followup results, using ELISA, indicated that no vesicular stomatitis virus activity occurred in the two herds studied. The seronegative cohorts did not yield a positive seroconversion pattern (Indiana and New Jersey types). The seropositive cohorts showed an up-and-down antibody pattern. There was no evidence of clinical cases of vesicular stomatitis in the two herds. In addition, live insects were collected, using Centers for Disease Control type light traps, for the detection of VSV isolates. *Culicoides insignis* and *Culex nigripalpus* were the insects most represented during a 12-month (January through December 1988) entomologic survey. The identification of two unknown viral isolates from *Cx. nigripalpus* is in progress. The ELISA method, used in field conditions during the followup, proved useful in the serodiagnosis of vesicular stomatitis. Both the serum neutralization test and ELISA were highly correlated in the detection of vesicular stomatitis antibodies. (J. A. Hernandez, School of Veterinary Medicine, Univ. Autonomous of Baja California, Mexicali, B.C., Mexico 21100; M. D. Salman, Colorado State University, Department of Environmental Health, Ft. Collins, CO 80522; and J. Mason, USDA, APHIS, VS, 6525 Belcrest Road, Hyattsville, MD 20782, (301) 436-4363; and P. A. Webb and D. B. Franc, Centers for Disease Control, Division of Vector-Borne Diseases, Ft. Collins, CO 80522-2087)

Salmonella Enteritidis Update

The clinical signs of Salmonella enteritidis (SE) phage type 4 (PT-4) in poultry were described in the winter 1988 issue (see 16-4:23). SE PT-4 is considered highly invasive. Where SE PT-4 is endemic in Europe, there has been an approximate tenfold increase in human SE infections during the past decade.

SE PT-4 resulted in losses for poultry producers due to decreased production and the condemnations of birds at slaughter. SE PT-4 is not known to exist in the U.S. poultry industry. This strain has been isolated from several people who had recently entered the United States. The organism was eliminated without exposing poultry.

Preventing the introduction of SE PT-4 into the United States poultry industry relies upon the continuing close cooperation between the USDA, States, and the poultry industry.

While SE has a wide host range and occurs worldwide, the PT-4 type appears to have a rather limited host range of pathogenicity (domestic chickens, people, certain rodents, and possibly pet birds) and geographical distribution, having been identified as a significant cause of disease in some areas of Europe, including the Iberian peninsula,

Balkan countries, and the United Kingdom. However, because the identification of phage type is difficult, requires the availability of a reference collection of typing phages, and can be done at only a few designated laboratories, the appearance of limited range may be misleading. The current situation clearly justifies a disease control strategy of multiple barriers to the possible transmission of SE PT-4.

USDA has added to its longstanding program of avian salmonellosis control, centered in the National Poultry Improvement Plan's flock testing and certification program, a *Salmonella* Enteritidis Task Force for the containment and safe disposition of any flock that is found by public health officials to be the source of food contamination (see 18-2:2-3), and a requirement that birds intended for importation be tested and found free of SE PT 4 and other pathogens. Phage typing of *Salmonella enteritidis* organisms that are isolated in these disease-prevention initiatives is performed at the USDA's National Veterinary Services Laboratories, Ames, IA.

The Emergency Programs staff has developed and widely distributed a series of videotapes on biosecurity for the various segments of the poultry industry and has compiled and distributed a bibliography of scientific articles on avian salmonellosis. Information on *Salmonella enteritidis* may be obtained by contacting Dr. John Mason, Director, *Salmonella* Enteritidis Task Force, 6525 Belcrest Road, Room 3741, Hyattsville, MD 20782, (301) 436-4363. Bibliographies and selected articles on avian salmonellosis, biosecurity videos, and a wide range of information on foreign and emergency diseases of livestock and poultry may be obtained by contacting the Emergency Programs Data Bank, USDA, APHIS, 6505 Belcrest Road, Room 741, Hyattsville, MD 20782, (301) 436-8687 or FTS 436-8687.

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(Dr. Sean F. Altekruse, USDA, APHIS, VS, Federal Building, Room 745, Hyattsville, MD 20782, (301) 436-8073)

Editorial Committee

Membership on the FADR Editorial Committee has been changed. The current members are as follows: Dr. Edwin I. Pilchard (Chairman), Dr. Robert R. Ormiston, Dr. M. A. Mixson, Dr. Michael S. Gilsdorf, Dr. Eric R. Hoffman, Dr. Peter Fernandez, Dr. Alfred W. Montgomery, and Dr. John J. Blackwell.

Errata

The Foreign Animal Disease Report Spring 1990 issue reported velogenic viscerotropic Newcastle disease in Panama during August 1989 (18-1:6). This was based upon information published in OIE Bulletin Vol. 101 - No.8, August 1989. In November 1989, OIE sent the following erratum statement to all its member countries: " *Bulletin Vol. 101 - No. 8 August 1989*, page 426 - Newcastle disease, Panama: Instead of: Velogenic virus, read: Virus not characterized."

In the Summer 1990 issue, the correct spelling of the author's name for the article entitled, "Lumpy Skin Disease in Israel" is Dr. A. Shimshony. Dr. Shimshony notes that clinical observations were confirmed as lumpy skin disease in the Kimron Veterinary Institute, Beit Dagan, Israel.

Questions about the FAD Report may be sent to:

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